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=> s asphalt and emulsion and (aerosol or atomiz?) and coal
         23142 ASPHALT
          3410 ASPHALTS
         24128 ASPHALT
                 (ASPHALT OR ASPHALTS)
        171814 EMULSION
        101920 EMULSIONS
        208076 EMULSION
                 (EMULSION OR EMULSIONS)
         48149 AEROSOL
         37753 AEROSOLS
         58644 AEROSOL
                 (AEROSOL OR AEROSOLS)
         32345 ATOMIZ?
        196148 COAL
         34034 COALS
        199485 COAL
                 (COAL OR COALS)
L1           0 ASPHALT AND EMULSION AND (AEROSOL OR ATOMIZ?) AND COAL

=> s asphalt and emulsion and coal
         23142 ASPHALT
          3410 ASPHALTS
         24128 ASPHALT
                 (ASPHALT OR ASPHALTS)
        171814 EMULSION
        101920 EMULSIONS
        208076 EMULSION
                 (EMULSION OR EMULSIONS)
        196148 COAL
         34034 COALS
        199485 COAL
                 (COAL OR COALS)
L2         219 ASPHALT AND EMULSION AND COAL
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=> s l2 and spray?
        208285 SPRAY?
L3          29 L2 AND SPRAY?

=> d l3 1-29 ti

L3   ANSWER 1 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Surface-processing agent for piles of coal or petroleum coke
     under open-air storage

L3   ANSWER 2 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Dust suppression by spraying soil with surfactant-containing
     emulsion and solution

L3   ANSWER 3 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Combined method for simultaneously dewatering and reconstituting finely
     divided carbonaceous material

L3   ANSWER 4 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Waterproofing coatings for outdoor piles

L3   ANSWER 5 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Stable lignosulfonate emulsion

L3   ANSWER 6 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Coal ash solid board for pavement

L3   ANSWER 7 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Moisture control in coal during outdoor storage

L3   ANSWER 8 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Moisture-controlling emulsion for outdoor storage of
     coal

L3   ANSWER 9 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Emulsified fuels of viscous oils

L3   ANSWER 10 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Coating preventing autoignition of coal

L3   ANSWER 11 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Control of dust during coal transportation

L3   ANSWER 12 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Dust preventives containing asphalt emulsions

L3   ANSWER 13 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Coal dust scattering preventative

L3   ANSWER 14 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Prevention of self-combustion in thermally treated coke briquets

L3   ANSWER 15 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Coating of ore pellets with bituminous emulsions to prevent
     abrasive degradation

L3   ANSWER 16 OF 29  CAPLUS  COPYRIGHT 2002 ACS
TI   Possibilities of utilizing petroleum asphalts in molding
     mixtures for gray iron castings

L3   ANSWER 17 OF 29  CAPLUS  COPYRIGHT 2002 ACS
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TI Comparing coatings in shallow and deep ocean environments

L3 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI American Society for Testing Materials, Standards, 1955, IV. Paint, naval stores, cellulose, wax polishes, wood, acoustical materials, sandwich and building constructions, fire tests

L3 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI American Society for Testing Materials, Standards, 1952. V. Fuels, petroleum, aromatic hydrocarbons, engine antifreezes

L3 ANSWER 20 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI American Society for Testing Materials, Standards, 1952. IV. Paint, naval stores, wood, sandwich constructions, building constructions, fire tests

L3 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI **Asphalt emulsion spray** for rendering **coal** dustproof

L3 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI Asphaltic **emulsion**

L3 ANSWER 23 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI Soluble high-molal oxyalkylated esters adapted for demulsifying crude-oil **emulsions** and various other similar uses

L3 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI American Society for Testing Materials, Standards, 1942. II. Nonmetallic materials, constructional

L3 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI Soap-what new uses?

L3 ANSWER 26 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI American Society for Testing Materials, Tentative Standards

L3 ANSWER 27 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI American Society for Testing Materials, Tentative Standards

L3 ANSWER 28 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI Bituminous pipe coatings

L3 ANSWER 29 OF 29 CAPLUS COPYRIGHT 2002 ACS
TI Road Dust: Its Control and Prevention

=> d l3 1-16, 21,22,25 all

L3 ANSWER 1 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 2002:63690 CAPLUS
DN 136:104960
TI Surface-processing agent for piles of **coal** or petroleum coke under open-air storage
IN Takagi, Fumiaki; Takeshita, Hidenori
PA Idemitsu Kosan Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C10L005-00
ICS B65G003-02; C09K003-18; C09K003-22
CC 51-24 (Fossil Fuels, Derivatives, and Related Products)

Section cross-reference(s): 42

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002020769	A2	20020123	JP 2000-210942	20000712

PI JP 2002020769 A2 20020123 JP 2000-210942 20000712

AB The agent comprises (A) 30-95 wt.% of **asphalt emulsion** comprising **asphalt** 30-70, surfactant 0.5-10, and H2O 20-69.5 wt.% and (B) 5-70 wt.% of high-concn. polymer **emulsion** contg. 30-70 wt.% polymers. The agent is **sprayed** onto the piles of **coal** or petroleum coke for prevention of their scattering, flowing-out, or penetration of rainwater into them.

ST **asphalt** polymer surface processing agent **coal** petroleum coke pile

IT Coating materials
(surface-processing agent for covering piles of **coal** or petroleum coke under open-air storage)

IT **Coal**, processes
Petroleum coke
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(surface-processing agent for covering piles of **coal** or petroleum coke under open-air storage)

IT Acrylic polymers, uses
Asphalt
RL: TEM (Technical or engineered material use); USES (Uses)
(surface-processing agent for covering piles of **coal** or petroleum coke under open-air storage)

IT 108-05-4D, Vinyl acetate, polymers with maleate 110-16-7D, Maleic acid, derivs., polymers with vinyl acetate 7732-18-5, Water, uses 9002-92-0, Polyoxyethylene monolauryl ether 9003-20-7, Vinyl acetate homopolymer 9003-55-8, Butadiene-styrene copolymer 24937-78-8, Ethylene-vinyl acetate copolymer 25085-34-1, Acrylic acid-styrene copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(surface-processing agent for covering piles of **coal** or petroleum coke under open-air storage)

L3 ANSWER 2 OF 29 CAPLUS COPYRIGHT 2002 ACS

AN 1995:756306 CAPLUS

DN 123:151712

TI Dust suppression by **spraying** soil with surfactant-containing **emulsion** and solution

IN Matsuda, Naomichi; Takahashi, Fujio

PA Nippon Oils & Fats Co Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B65G003-02
ICS C09K003-22

CC 59-6 (Air Pollution and Industrial Hygiene)
Section cross-reference(s): 58

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07117823	A2	19950509	JP 1993-287596	19931021

PI JP 07117823 A2 19950509 JP 1993-287596 19931021

AB Soil is **sprayed** with an **emulsion** of bituminous substance contg. a 1st ionic surfactant (e.g., octadecylamine acetate) and with an aq. soln. of a 2nd ionic surfactant (e.g., Na dodecylbenzenesulfonate) having ionicity inversed to that of the 1st surfactant.

ST dust suppression **asphalt emulsion** surfactant; ionic surfactant dust suppression; octadecylamine acetate surfactant dust

suppression; sodium dodecylbenzenesulfonate surfactant dust suppression

IT Soils
(dust suppression by **spraying** soil with surfactant-contg. **emulsion** and soln.)

IT **Asphalt**
RL: NUU (Other use, unclassified); USES (Uses)
(dust suppression by **spraying** soil with surfactant-contg. **emulsion** and soln.)

IT Petroleum products
(arom. oils, dust suppression by **spraying** soil with surfactant-contg. **emulsion** and soln.)

IT Tar
RL: NUU (Other use, unclassified); USES (Uses)
(**coal**, dust suppression by **spraying** soil with surfactant-contg. **emulsion** and soln.)

IT Air purification
(dust suppression, dust suppression by **spraying** soil with surfactant-contg. **emulsion** and soln.)

IT Surfactants
(ionic, dust suppression by **spraying** soil with surfactant-contg. **emulsion** and soln.)

IT 2190-04-7, Octadecylamine acetate 25155-30-0, Sodium dodecylbenzenesulfonate
RL: MOA (Modifier or additive use); USES (Uses)
(dust suppression by **spraying** soil with surfactant-contg. **emulsion** and soln.)

IT 112-02-7, Hexadecyltrimethylammonium chloride 112-03-8, Octadecyltrimethylammonium chloride 139-08-2 143-19-1, Sodium oleate 577-11-7, Sodium dioctylsulfosuccinate 32612-48-9 70353-34-3
RL: MOA (Modifier or additive use); USES (Uses)
(surfactant; dust suppression by **spraying** soil with surfactant-contg. **emulsion** and soln.)

L3 ANSWER 3 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1991:27127 CAPLUS
DN 114:27127
TI Combined method for simultaneously dewatering and reconstituting finely divided carbonaceous material
IN Wen, Wu Wey; Deurbrouck, Albert W.
PA United States Dept. of Energy, USA
SO U.S., 11 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C10L005-16
NCL 044568000
CC 51-17 (Fossil Fuels, Derivatives, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4969928	A	19901113	US 1989-318567	19890303
US 318567	A0	19901215		

AB A finely divided carbonaceous material (e.g., **coal**) is dewatered and reconstituted in a combined process by adding a binding agent, e.g., aq. **asphalt emulsion**, directly into slurry of finely divided material and dewatering the material to form a cake or consolidated piece which can be hardened by drying at ambient or elevated temps. Alternatively, the binder often in the form of a crusting agent is **sprayed** onto the surface of a moist cake prior to curing.

ST **coal** dewatering reconstitution binding agent; **asphalt emulsion coal** dewatering reconstitution

IT **Coal** treatment

(dewatering-reconstitution, in slurry, binding agent for, **asphalt emulsion** as)

IT **Asphalt**
RL: USES (Uses)
(**emulsions**, binders, for dewatering-reconstituting finely divided carbaneceous materials)

L3 ANSWER 4 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1988:133584 CAPLUS
DN 108:133584
TI Waterproofing coatings for outdoor piles
IN Shinkawa, Naohito; Akiyama, Yoshinori; Tanaka, Takehiko; Shibuno, Takeshi
PA Nippon Steel Corp., Japan; Nitto Electric Industrial Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D005-02
ICS C09D003-46; C09D005-00
CC 42-13 (Coatings, Inks, and Related Products)
Section cross-reference(s): 51
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62285963	A2	19871211	JP 1986-130798	19860605
JP 63019546	B4	19880422		

AB The title coating materials comprise an aq. resin **emulsion** and an aq. **asphalt emulsion**. A 50% solids 65:35 Bu acrylate-styrene copolymer **emulsion** was mixed 25:75 with CPE-1 **asphalt emulsion** and thinned 1:2 with water to give a coating material. A 2.5-kg **coal** pile (surface area 0.1 m2) was **sprayed** to 3 kg/m2 with 1% aq. glycerol, dried, **sprayed** to 2 kg/m2 with the above coating material, dried at 20.degree. for 4 days, and subjected to 900 mL rain at a rate of 100 mL/h. The rain penetration was 1 kg/m2, compared with 4 without the **asphalt emulsion** and 5 without the copolymer **emulsion**.
ST acrylic **asphalt** waterproofing **coal** pile
IT **Asphalt**
RL: USES (Uses)
(**emulsion**, contg. styrene copolymers, for waterproofing of **coal**)
IT **Coal**
RL: USES (Uses)
(waterproofing of, **asphalt emulsions** contg. styrene copolymers for)
IT Waterproofing
(agents, **asphalt emulsion** contg. styrene copolymers, for **coal**)
IT 9003-55-8, Butadiene-styrene copolymer 25767-47-9, Butyl acrylate-styrene copolymer
RL: USES (Uses)
(**asphalt emulsions** contg., for waterproofing of **coal**)

L3 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1987:536176 CAPLUS
DN 107:136176
TI Stable lignosulfonate **emulsion**
IN Hollis, John W., Jr.; Layman, Linda M.
PA Reed Lignin, Inc., USA
SO U.S., 7 pp.
CODEN: USXXAM

DT Patent
LA English
IC ICM C08L097-02
NCL 106123100
CC 43-5 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 51
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4666522	A	19870519	US 1985-701121	19850213

AB A stable lignosulfonate **emulsion**, useful as a binder, comprises an aq. dispersion of lignosulfonate-contg. material having an initial solids concn of .apprx.45-65 wt.%, and .apprx.1-50 parts/100 parts of the lignosulfonate-contg. material of a hydrophobe, e.g., wax, oil, fat, and/or **asphalt**. **Spray** drying the **emulsion** provides a powder which is less dusty than comparable lignosulfonate products, and which upon rewetting, provides a stable **emulsion**. A 5% lignosulfonate-no. 6 oil **emulsion** was used as a binder for **coal** briquets showing initial compressive strength 79 psi, compared with 37 psi for briquets contg. Ca lignosulfonate alone.

ST lignosulfonate **emulsion** binder stability; oil lignosulfonate **emulsion** binder briquet; wax lignosulfonate **emulsion** binder stability; fat lignosulfonate **emulsion** binder stability; **asphalt** lignosulfonate **emulsion** binder stability

IT Fuel briquets
(**coal**, manuf. of, binders for, lignosulfonate-oil **emulsions** as)

IT **Asphalt**
Hydrocarbon oils
Paraffin oils
Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous
Soybean oil
Tallow
RL: USES (Uses)
(**emulsions** with lignosulfonates, binders, with improved stability)

IT Pulping liquors, uses and miscellaneous
RL: USES (Uses)
(spent, **emulsions** with oils, binders, with enhanced stability, for **coal** briquets)

IT 8061-52-7, Calcium lignosulfonate 8061-53-8
RL: USES (Uses)
(**emulsions** with oils, binders, with enhanced stability, for **coal** briquets)

L3 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1987:8798 CAPLUS
DN 106:8798
TI **Coal** ash solid board for pavement
IN Torio, Akira; Kamei, Yoshihiro; Hanami, Koji
PA Sumitomo Construction Co., Ltd., Japan; Hokuden Kogyo K. K.
SO Jpn. Kokai Tokkyo Koho, 2 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM E02D003-12
ICS C09K017-00
CC 58-4 (Cement, Concrete, and Related Building Materials)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61172918	A2	19860804	JP 1985-11984	19850125

AB **Coal** ash is mixed with water, compacted, solidified, **spray**-coated with **asphalt emulsion** at 0.5-1.2 L/m2, cured and used for pavement. The **asphalt** coating prevents water penetration through the **coal** ash board.

ST **coal** ash board pavement; **asphalt** coating ash board pavement

IT Coating materials
(**asphalt**, on **coal** ash boards, for pavement)

IT Pavements and Roads
(**coal** ash boards for, **asphalt**-coated)

IT Ashes (residues)
(**coal**, board, with **asphalt** coating, for pavements)

IT **Asphalt**
RL: USES (Uses)
(coatings, on **coal** ash boards, for pavements)

L3 ANSWER 7 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1985:544693 CAPLUS
DN 103:144693
TI Moisture control in **coal** during outdoor storage
PA Sumikin Chemical Engineering Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B65G003-02
ICS B65G069-20; C10L005-00
CC 51-24 (Fossil Fuels, Derivatives, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 60061403	A2	19850409	JP 1983-167216	19830909

PI JP 60061403 A2 19850409 JP 1983-167216 19830909

AB The water content of **coals** stored outside in piles is controlled by applying an **emulsion** of **asphalt** contg. 1-10% pulverized coke. Thus, a **coal** pile (10 tons) was **sprayed** at the rate of 2 L/m2 with an **asphalt emulsion** contg. 3% of 53-76 .mu. pulverized coke. After 60 days, the water content of the **coal** pile remained almost unchanged, but a similar **coal** pile **sprayed** only with an **asphalt emulsion** exhibited an increase in water content.

ST **coal** moisture control **asphalt emulsion**; coke pulverized **coal** moisture control

IT **Asphalt**
RL: USES (Uses)
(**emulsions**, contg. pulverized coke, for moisture control in outdoor storage of **coal**)

IT Coke
RL: USES (Uses)
(pulverized, **asphalt emulsions** contg., for moisture control in outdoor storage of **coal**)

IT **Coal**
RL: USES (Uses)
(storage of, moisture control in, **asphalt emulsions** contg. pulverized coke for)

L3 ANSWER 8 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1985:223290 CAPLUS
DN 102:223290
TI Moisture-controlling **emulsion** for outdoor storage of **coal**
PA Sumikin Kako Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C10L005-00
ICA B65G003-02; C09K003-18; C09K003-22
CC 51-24 (Fossil Fuels, Derivatives, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 59226095	A2	19841219	JP 1983-100045	19830603

AB An **asphalt emulsion** for prevention of moisture uptake of **coal** stored outdoors in piles (diam. <25 mm) contains <20 wt.% **coal** tar. Thus, a cationic **asphalt emulsion** was **sprayed** (2 L/m2) over a 10 t **coal** pile. The increase in moisture content after 60 days were from 9.0-9.1 wt.% to 9.5 wt.% with and to 10.6 wt.% without the **spray**.
ST **asphalt emulsion coal** tar storage; moisture content control **coal** storage
IT **Asphalt**
RL: USES (Uses)
(**emulsions** of, with **coal**-tar, for moisture control of **coal** during storage)
IT **Coal**
RL: USES (Uses)
(outdoor storage of, moisture content of, control of, **emulsions** for)
IT Tar
RL: USES (Uses)
(**coal**, **emulsion** of, with **asphalt**, for moisture control of **coal** during storage)

L3 ANSWER 9 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1984:574468 CAPLUS
DN 101:174468
TI Emulsified fuels of viscous oils
PA Toyo Rubber Industry Co., Ltd., Japan; Kawasaki Heavy Industries, Ltd.
SO Jpn. Tokkyo Koho, 7 pp.
CODEN: JAXXAD
DT Patent
LA Japanese
IC F23C011-00; F23D011-06; C10L001-32
CC 51-12 (Fossil Fuels, Derivatives, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 59025121	B4	19840614	JP 1973-28286	19730310

AB Emulsified fuels contg. viscous oil 20-80, water 20-80, and surfactant 0.001-5 wt.%, are stable at <100.degree., have low viscosity, emit low levels of NOx upon combustion, and achieve nearly complete combustion without soot generation. Thus, 200 parts aq. polyoxyethylene nonylphenyl ether sulfate Na salt [9014-90-8] (3 wt.% soln.) at 60-80.degree. was mixed with 200 parts **asphalt** (specific penetration 80-100) at 100-120.degree. and stirring at 3000 rpm. The **emulsion** had viscosity 4000 cP at 30.degree. and the droplet diam. of dispersed phase was .apprx.6 .mu.. The combustion of the **sprayed** fuel at excess air ratio 1.1-1.3:1 did not generate soot; the concn. of NOx in the flue gas was 220-250 ppm.
ST fuel **emulsion** viscous oil; combustion fuel **emulsion**; surfactant fuel **emulsion**; nitrogen oxide fuel **emulsion** combustion; soot fuel **emulsion** combustion
IT Glycerides, uses and miscellaneous
RL: USES (Uses)

(dispersants, for fuel **emulsions**)

IT Pitch
Asphalt
Paraffin oils
Waxes and Waxy substances
RL: USES (Uses)
(**emulsions** contg., as low-viscosity fuels, manuf. and combustion of)

IT Combustion
(of emulsified fuels)

IT Tar
RL: USES (Uses)
(**coal, emulsions** contg., as low-viscosity fuels, manuf. and combustion of)

IT Petroleum products
(heavy oils, emulsified fuels contg., manuf. and combustion of)

IT 67-56-1, uses and miscellaneous 107-21-1, uses and miscellaneous
9002-89-5 9005-38-3 9014-90-8 9016-45-9
RL: USES (Uses)
(dispersants, for fuel **emulsions**)

IT 11104-93-1, uses and miscellaneous
RL: RCT (Reactant); RACT (Reactant or reagent)
(in flue gases, from combustion of emulsified fuels, redn. of)

L3 ANSWER 10 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1980:200778 CAPLUS
DN 92:200778
TI Coating preventing autoignition of **coal**
IN Novak, Ladislav
PA Czech.
SO Czech., 2 pp.
CODEN: CZXXA9
DT Patent
LA Czech
IC E21F005-06
CC 51-21 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 59

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CS 180529	B	19790915	CS 1976-4313	19760630

AB **Coal** seams in deep mines are **sprayed** or painted with an adhesive mixt. contg. thermal-insulating and fire-extinguishing components, to prevent autoxidn. and fire. E.g., a suspension of casein 12.5 in water 60 contg. 24% aq. NaOH 2.5 parts was treated successively at 20-30.degree. with 3:2 $NaNO_2$-K_2HPO_4 5, varnish 2.5, urotropine [100-97-0] 16, graphite 7, and an **asphalt**-latex **emulsion** 50 parts. Prior to application, the mixt. was homogenized with 150-90 parts cement.

ST safety **coal** mine coating; ignition **coal** mine preventive; casein **coal** mine coating fire; nitrite **coal** coating fire; latex **coal** coating fire; **asphalt** **coal** coating fire

IT **Coal**
RL: RCT (Reactant)
(autoignition of, coating materials for prevention of)

IT Cement
Latex
Asphalt
Caseins, uses and miscellaneous
RL: USES (Uses)
(coating materials contg., for prevention of autoignition of

coal seams)
IT Coating materials
(for prevention of autoignition of **coal** seams, manuf. of)
IT Fire
(prevention of, in **coal** seams, coating materials for)
IT Mines
(**coal**, autoignition in, coating materials for prevention of)
IT Ignition
(spontaneous, of **coal** seams, coating materials for prevention of)
IT 100-97-0, uses and miscellaneous 1310-73-2, uses and miscellaneous 7632-00-0 7758-11-4 7782-42-5, uses and miscellaneous
RL: USES (Uses)
(coating materials contg., for prevention of autoignition of **coal** seams)

L3 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1980:79353 CAPLUS
DN 92:79353
TI Control of dust during **coal** transportation
IN Doeksen, Gerard
PA Cominco Ltd., USA
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
IC B65B033-00
NCL 427155000
CC 51-21 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 43
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4169170	A	19790925	US 1977-765033	19770202
	AU 7727682	A1	19790208	AU 1977-27682	19770805
PRAI	CA 1974-196405		19740329		
	US 1975-559102		19750317		
	US 1977-765033		19770202		

AB **Coal** is protected against loss due to wind during rapid movement of an open-top hopper car by **spraying** with an aq. compn. contg. .gtoreq.2.5% of a binder and 0.1-2.0% of water-sol. ethoxylated alkylphenol or sulfosuccinate wetting agent to form a protective layer. The binder consists of a solid material in aq. suspension of **asphalt emulsion** or black liquor lignin product. Thus, **coal** transported .apprx.700 mi by rail cars was treated with a compn. contg. 30% **asphalt** and 0.25% Dowell 600 [72674-06-7]. The protective layer (2.5 in.) formed at the end of the run was very strong. The layer showed a few cracks (1/16 in. wide) only during the last 100 mi of the run.
ST **coal** transportation dust control; wetting agent **coal** **spraying**; **asphalt emulsion** binder **coal** transportation; lignin binder **coal** transportation; alkylphenol ethoxylated wetting agent **coal**; sulfosuccinate wetting agent **coal**
IT **Asphalt**
RL: USES (Uses)
(binders, for dust control in **coal** transportation)
IT **Coal**
RL: USES (Uses)
(transportation of, dust control in, binder and wetting agent for)
IT 8061-51-6 8061-53-8
RL: USES (Uses)

(binders, for dust control in **coal** transportation)

IT 577-11-7 72674-06-7
RL: USES (Uses)
(wetting agent, for dust control in **coal** transportation)

IT 25322-68-3D, alkylphenyl ethers
RL: USES (Uses)
(wetting agents, for dust control in **coal** transportation)

L3 ANSWER 12 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1976:76737 CAPLUS
DN 84:76737
TI Dust preventives containing **asphalt emulsions**
IN Ozaki, Hiromi; Tokairen, Toshio
PA Nippon Mining Co., Ltd., Japan
SO Japan. Kokai, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
NCL 13(9)E6; 86(3)D312.1
CC 51-10 (Fossil Fuels, Derivatives, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 50040491	A2	19750414	JP 1973-88061	19730807
JP 59018431	B4	19840427		

AB Compns. of **asphalt emulsion** 70-95, polyethylene glycol alkylphenyl ether [having hydrophilic-lipophilic balance (HLB) 12-15] 2-5, and diethylene glycol alkyl ether, alc. or glycol (<C5), or alicyclic alc. (<C7) >0.5% are dild. with H2O and applied to **coal** or ores to prevent dust. Thus, 90 parts of **asphalt emulsion** from straight **asphalt** 65, Na dodecylbenzenesulfonate 0.5, NaOH 0.1, and H2O 34.4% and 10 parts of a mixt. of polyethylene glycol nonylphenyl ether [9016-45-9] (HLB 12-15) 40, diethylene glycol Bu ether [112-34-5] 10, and H2O 50% were mixed to give a dust-preventing compn. The mixt. was dild. with 100 parts H2O and **sprayed** onto powd. **coal** to 3 l./m2. The mixt. wetted the powder well and formed a weathering-resistant, dust-preventing layer.

ST dust preventive **asphalt emulsion**; **coal** dust prevention; ore dust prevention; **asphalt emulsion** dust preventive

IT Coating materials
(**asphalt emulsions**, contg. glycol ethers, for **coal**)

IT **Emulsions**
(**asphalt**-water, contg. glycol ethers, for prevention of dust on **coal**)

IT **Coal**
RL: USES (Uses)
(dust-preventing **sprays** for, contg. **asphalt emulsions**)

IT **Asphalt**
RL: USES (Uses)
(**emulsions** contg. glycol ethers and aq., dust-preventing **sprays**, for **coal**)

IT 112-34-5 9016-45-9
RL: USES (Uses)
(**asphalt**-water **emulsions** contg., for prevention of dust on **coal**)

L3 ANSWER 13 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1973:455729 CAPLUS
DN 79:55729

TI **Coal** dust scattering preventative
IN Fujii, Kosaku; Adachi, To; Tsukada, Yuichi; Okuda, Ken; Suzuki, Hiroyuki
PA Nihon Koken Kogyo Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
NCL 13(9)E6
CC 52-7 (Coal and Coal Derivatives)
Section cross-reference(s): 59
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 48024983	B4	19730331	JP 1971-58950	19710804

AB An **emulsion** consisting of **coal** tar, **asphalt**, or heavy oil, a small amt. of fatty acid pitch, surfactant, and water is useful for preventing dusting and weathering of materials stored in the open air such as **coals**, ores, and oil cokes. The **emulsion** does not affect the properties of the materials when they are used for coking or in a blast furnace. Thus, **coal** tar 77, **asphalt** 19, fatty acid pitch 4, Na oleate type emulsifier 1 and a nonionic **emulsion** stabilizing agent 0.1% were mixed in water to obtain an **emulsion** contg. 40% water. When the **emulsion** was **sprayed** (4 l./m2) on powd. **coal**, scattering of **coal** dust was effectively prevented for 25-35 days; a conventional **spray**(60:40 **coal** tar-water) was effective for .apprx.15 days.
ST **coal** storage coking **emulsion**; ore storage coking **emulsion**; **coal** tar **emulsion** coating
IT **Coal**
Coke
Ores and Ore deposits
RL: USES (Uses)
(control of dust and weathering of, tar **emulsion** for)
IT Dust
(control of, tar **emulsions** for, on **coal** and ore)
IT **Asphalt**
Tar
RL: USES (Uses)
(**emulsions**, for control of dust and weathering of **coal** and ore)
IT Pitch
(fatty acid, tar **emulsions** contg., for control of dust and weathering of **coal** and ore)
IT **Emulsions**
(tar, for control of dust and weathering of **coal** and ore)

L3 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1973:100290 CAPLUS
DN 78:100290
TI Prevention of self-combustion in thermally treated coke briquets
IN Cieckiewicz, Edward
PA Instytut Chemicznej Przerobki Wegla
SO Pol., 2 pp.
CODEN: POXXA7
DT Patent
LA Polish
IC C10L
CC 52-8 (Coal and Coal Derivatives)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI PL 65254 19720630 PL 19690505
AB Before heating briquets in a tunnel oven they are **sprayed** with a molten binder or an **emulsion** contg. 10-70% **coal** tar, pitch or **asphalt** oil and water.
ST coke briquetting combustion prevention
IT Coke
RL: USES (Uses)
(briquets, calcination of, spontaneous ignition prevention in)
IT Pitch
Asphalt
Tar
RL: USES (Uses)
(coke briquet spontaneous ignition prevention by, in calcination)
IT Briquets, fuel
(coke, calcination of, spontaneous ignition prevention in)
IT Ignition
(spontaneous, prevention of, in calcination of coke briquets)

L3 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1972:27316 CAPLUS
DN 76:27316
TI Coating of ore pellets with bituminous **emulsions** to prevent abrasive degradation
IN Bremer, Edward R.; Ripple, Robert M.
PA Chevron Research Co.
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
IC C21B; C22B
NCL 117100000B
CC 54 (Extractive Metallurgy)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3619263	A	19711109	US 1968-784482	19681217

AB Improved abrasion resistance of metallic ore pellets is achieved by coating the pellets at <750.degree.F with 0.1-0.3 wt. % solids relative to the pellet wt. by using an aq. **emulsion** of a bitumen having an ASTM-D-5-65 penetration at 77.degree.F of 0-50. Suitable bitumens include various **asphalt** residues, airblown **asphalts**, solvent extracts, **coal** tar pitches. etc. **Emulsions** which are effective include those prepd. with cationic, anionic, or nonionic emulsifiers, e.g. salts of fatty amines (tallow 1,3-propylenediamine salt), the quaternary ammonium salts (diethylmethyldo-decylammonium chloride), glyercol mono-, di- and trilaurates, ethoxylated salts of nonylphenol, fatty acid soaps, rosin soaps, casein, procein, etc. Various methods may be used to coat the pellets as by direct **spraying** of the pellets in free-falling streams.
ST ore bituminous coating; abrasive degradation ore redn
IT Iron ores, uses and miscellaneous
RL: USES (Uses)
(coating of pellets of, with bituminous **emulsion**, for abrasion resistance)
IT Bitumens
RL: PROC (Process)
(coating with, on iron ore pellets, for abrasion resistance)
IT Pellets
(iron ore, coating by bituminous **emulsions** of, for abrasion resistance)
IT 12249-26-2
RL: PROC (Process)

(coating of pellets of, by bituminous **emulsions**, for abrasion resistance)

L3 ANSWER 16 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1967:446197 CAPLUS
DN 67:46197
TI Possibilities of utilizing petroleum **asphalts** in molding mixtures for gray iron castings
AU Dlezek, Josef
CS Statni Vyzkumny Ustav Mater., Brno, Czech.
SO Slevarenstvi (1967), 15(4-5), 189-95
CODEN: SLEVAK
DT Journal
LA Czech
CC 55 (Ferrous Metals and Alloys)
AB Aq. suspensions and **emulsions** of petroleum **asphalts** as addns. in molding mixts. were examd. By the addn. of 1-2% **asphalt**, the dry strength of the mixts. increased 11-14 kg./cm.2, and the resistance of the mixts. to the formation of scabs and sand inclusions was considerably improved. Addns. to the mixts. or as **sprayings** of green molds improve the surface of the castings and permits replacing foundary **coal** dust. The suspension can also be added to CO2 mixts.
ST **ASPHALTS** MOLDING MIXTS; CAST IRON MOLDS; GRAY CAST IRON MOLDS; PETROLEUM **ASPHALTS** MOLDING MIXTS
IT Molds (forms)
(**asphalt** suspensions in, for gray iron)
IT **Asphalt**
RL: USES (Uses)
(suspensions, in mold compns. for gray iron)

L3 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1952:37536 CAPLUS
DN 46:37536
OREF 46:6366h
TI **Asphalt emulsion spray** for rendering **coal** dustproof
IN Rosencranse, Charles R.
PA Joe F. Klaner, Jr.
DT Patent
LA Unavailable
CC 21 (Fuels and Carbonization Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 23462		19520212	US	

AB A reissue of U.S. patent 2,431,891 (C.A. 42, 1734g).

L3 ANSWER 22 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1948:7917 CAPLUS
DN 42:7917
OREF 42:1734g-h
TI Asphaltic **emulsion**
IN Rosencranse, Charles R.
PA Joe F. Klaner, Jr.
DT Patent
LA Unavailable
CC 22 (Petroleum, Lubricants, and Asphalt)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2431891		19471202	US	

AB **Asphalt**, processed to give a penetration of 26-30 and a m.p. 210-260.degree.F., is heated to 300.degree.F. and run through a colloid mill in contact with an aq. dispersion which has been heated to 180.degree.F., the final temp. of the **emulsion** being rapidly reduced to 150.degree.F. The aq. dispersion is of the following compn.: H2O 95.04, petroleum-hydrocarbon-insol. pine-wood resin 3.0, bentonite clay 1.4, tall oil 0.10, and caustic soda 0.46%. The **sprayed** colloidal-**asphalt** suspension renders **coal** dustproof, impervious to moisture and oxidation, and prevents weathering and slacking of **coal**.

L3 ANSWER 25 OF 29 CAPLUS COPYRIGHT 2002 ACS
AN 1939:42913 CAPLUS
DN 33:42913
OREF 33:6078a-c
TI Soap-what new uses?
AU Smith, Paul T.
SO Soap (1939), 15(No. 6), 24-6
DT Journal
LA Unavailable
CC 27 (Fats, Fatty Oils, Waxes, and Detergents)
AB A promising new use for soap lies in the production of dustproofing fluids for the treatment of **coal** at the pithead. Soap has also been tried out as an emulsifying agent for the prepn. of colloidal fuels made from pulverized **coal** or pitch and heavy mineral oil. In the prepn. of many **asphalt** compns. soap is used for dispersing the bitumen. A favorite method is to emulsify with the aid of soap and then to stabilize the **emulsion** with a sol. protein such as blood albumin. Still other uses for soap are found in the manuf. of sponge-rubber and imitation leather. Oleates of Mg and Sn are useful addns. to lubricants such as bearing greases in which they reduce wear. Fabrics are rendered water-resistant by a resin condensation product applied in aqueous dispersion, made up of H2O-sol. soaps and the necessary aldehyde, ketone and amide resins. In the paper industry soap is used in the manuf. of a new starch sizing for paper pulp. The insecticide industry uses soap for making **sprays**.